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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,985	12/08/2003	Kia Silverbrook	ZG116US	1103

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SILVERBROOK RESEARCH PTY LTD
393 DARLING STREET
BALMAIN, 2041
AUSTRALIA

EXAMINER	
MITCHELL, JAMES M	
ART UNIT	**PAPER NUMBER**
2813	

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/728,985	SILVERBROOK, KIA	
	Examiner	Art Unit	
	James M. Mitchell	2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/12/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to the application filed December 8, 2003.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6,19 rejected under 35 U.S.C. 102(e) as being anticipated by Salatino (U.S. 5, 798,557).

Salatino (Fig.1-3, 5) discloses:

(cl.1) a tool (261 & i.e. wafer, 200 support), the tool comprising: a first tool half made from a semiconductor that has a coefficient of thermal expansion which is about the same as that of the wafer (Col. 5, Lines 55-56); the first tool half having surface features[1];

(cl. 2, 4) wherein the first tool half is made from silicon (Col. 5, Lines 55-56);

(cl. 3) and the first tool half cooperates with a second half, the first tool half and the second half together forming a mold;

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[1] The surface itself is capable of being adapted for molding etc.

(cl. 5) the features of the first tool half have a spacing which corresponds to a spacing of the wafer (i.e. space of cap, and space between tool and support, not shown; Fig. 5).

With respect to the intended use limitations of claims 1, for example, " used to hold an array of wafer scale protective caps..." and "...for an array," the prior art structure satisfies the claimed structural limitation. As such, the claimed limitation does not distinguish over the prior art, since it has been held that the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

With respect to the process limitation of claims 6 and 19, such as "etching" or "lithography," the claimed product is the same as product of the prior art. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyajima (U.S. 6,350,113) in combination with Cordes et al. (U.S 6,390,439).

Mayajima (Fig.11, 12, 15, 30) discloses:

(cl. 1, also 15 [incl. Lim. 1-12]) a tool (22a, b), the tool comprising: a first tool half; the first tool half having surface features[2];

(cl. 3) and the first tool half cooperates with a second half, the first tool half (20a) and the second half (20b) together forming a mold;

(cl. 5) the features of the first tool half have a spacing that corresponds to a spacing of the wafer (i.e. cavity, 28);

(cl. 7) wherein the first tool half has a lower surface in which recesses (28) are formed; the second half having an upper surface in which grooves are formed (28); the recesses and grooves defining the mold cavities (Fig. 30);

(cl. 8, 9) the first tool half includes first eject holes (i.e. space taken by item 42) formed through it; the holes located in registry with the surface features there being provided a first half release wafer (50) from which projects a number of pins (not labeled); the pins located in registry with the first holes (i.e. in left and right portions of 20a & 42); the first tool half having a thickness in the area of the first holes, the pins being longer than the thickness;

(cl. 12) and secon holes (i.e. cavity, 28) in registry with grooves (28) formed in upper portion;

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[2] The surface itself is capable of being adapted for molding etc.

(cl. 10, 11) the first half release wafer (50) has a first position in which the pins are flush with an interior end of the first holes; there being a gap (i.e. space in hole between release and first half) between the first half and the first half release wafer when the first half release wafer is in the first position.

(cl. 17) with material squeezed between first and second portions ("resin molding"; Title)

(cl 18) and thin layer (50) is between first and second portions (Fig. 30);

(cl. 20) a second mold half having an upper surface in which grooves are formed;

the surface features of the first tool half and grooves defining the mold cavities (Fig, 30).

With respect to the intended use limitations of claims 1, for example, " used to hold an array of wafer scale protective caps..." and "...for an array" and "for the caps," the prior art structure satisfies the claimed structural limitation. As such, the claimed limitation does not distinguish over the prior art, since it has been held that the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

With respect to the process limitation of claims 6 and 19, such as "etching" or "lithography," the claimed product is the same as product of the prior art. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even

though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Miyajima does not appear to disclose material for its mold/die being a semiconductor having about the same CTE as a wafer, such s silicon, which is transparent to UV about 1000-5000nm.

However Cordes utilizes a its mold/die ("plate") being a semiconductor such as silicon that has the same CTE as a wafer (Col. 10, Lines 39-42).

It would have been obvious to one of ordinary skill in the art to form the mold of Miyajma with silicon, which is transparent to UV about 1000-5000nm in order to eliminate shifting as taught by Cordes (Col. 10, Lines 39-42).

Furthermore, it has been held that to be within the general skill of a worker in the art to select known material on the basis of its suitability for intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416 (CCPA 1960).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art shows in the use of forming caps on wafers/substrates, and molding used for wafers and chips.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Mitchell whose telephone number is (571) 272-1931. The examiner can normally be reached on M-F 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jmm
May 13, 2005

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